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09/882,068

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EXAMINER

MARTIR, LILYBETT

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 11/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/882,068

Applicant(s)

SZWEC ET AL.

Examiner

Lilybett Martir

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-15, 17-22, 24 and 26-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-20, 26 and 27 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-15, 21-22, 24 and 28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 8-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Salatino (Pat. 5,085,084).

- With respect to claim 8, Salatino teaches first and second holding members as in elements 24,30,42 (24,30 and 42 forming one member) and 44 for holding both the package 10 and a portion of at least one lead 22 therebetween or in an intermediate space or interval in respective stationary positions, the holding members being capable of being separated from each other for removal and insertion of the package and leads and of being closed with respect to each other for firmly holding the package and leads held therebetween (Col. 3, lines 6-21).
- With respect to claim 9, Salatino teaches each of the first and second holding members having a first discrete or separate region for holding the electrical package therebetween as in element 10, a second discrete region for holding one lead therebetween as in elements 30 and 42 depicted on the right side of Figure 4 and a third discrete region for holding another lead 22 therebetween as in elements 30 and 42 depicted on the left side of Figure 4.

- With respect to claim 10, Salatino teaches said one lead and said another lead are leads 22, which oppose each other across the package 10 as noted in Figure 4.
- With respect to claim 11, Salatino teaches leads 22 that have end regions and wherein the second and third discrete regions of the first and second holding means as in elements 30 and 42 depicted on the left and right side of Figure 4 are situated such that they hold the leads therebetween at the end regions as noted in said Figure.
- With respect to claim 12, Salatino teaches second and third discrete regions of the first and second holding means as in elements 30 and 42 depicted on the left and right side of Figure 4 situated such that they hold the leads in between the end regions and regions where the leads are joined to the package. Note in Figure 4 that the wire is supported by elements 30 and 42 at an end portion and a portion directly proximate to it and that not only a minimal portion of the lead is supported by said elements).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1-3, 5-7, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salantino (Pat. 5,085,084) in view of applicant's admitted prior art (Background of the invention) and further in view of Ball (Pat. 6,230,569).

With respect to claim 1, Salantino teaches holding the package 10 and a portion of the lead 22 in respective stationary positions by means of elements 10,24,30 and 42, and applying a force to the lead proximate an area where the lead is joined to the package (Col. 3, lines 18-21). Salantino teaches that the pressure exerted in his test when the bond is broken is representative of the strength of the bond (Col. 3, lines 40-41), as he also teaches that applying and measuring a mechanical force to a wire lead in a bond pull test is well known in the art (Col. 1, lines 20-33). Applicant's teachings disclose in the Background of the Invention that it is well known in the art to utilize and test ceramic packages to which wires have been brazed (Page 1, lines 14-17 and 25-26). Ball also teaches that it is well known in the art to pull a lead wire while measuring the increasing force (Col. 2, lines 59-63). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teachings of the testing method of Salantino utilizing a well known lead testing technique by measuring how much force the lead withstands until it finally breaks as taught by both Salantino and Ball to make said method versatile therefore allowing to precisely obtain quantitative values that represent actual force measurements of the force

being applied when the bond breaks. It would also have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teachings of the testing method of Salantino utilizing well known lead fixing materials and methods such as ceramic and brazing as taught in the applicant's Background of the Invention to further test well known and commonly used materials in order to make the test being performed more realistic.

- With respect to claim 2, Salantino teaches a lead 22 having an end region and the lead being held at it's end region by means of elements 24, 30 and 42 as noted in Figure 4.
- With respect to claim 3, Salantino teaches a portion of the lead 22 being held at a region between the end region and the area where the lead is joined to the package 10 (Note in Figure 4 that the wire is supported by elements 30 and 42 at an end portion and a portion directly proximate to it and that not only a minimal portion of the lead is supported by said elements).
- With respect to claims 5 and 6, Salantino teaches a force applied to the lead is a pulling force (Col. 2, line 67) and a force applied to the lead is a pushing force (Col. 3, lines 18-21).
- With respect to claim 7, Salantino teaches a package 10 that has two opposing leads 22 joined to it as noted in Figure 4, wherein the opposing leads 22 are held in respective stationary positions at their respective

end regions by means of elements 30,24 and 42, and wherein said steps of applying a force (Col. 3, lines 18-21), and measuring the resistance of the lead to the force (Col. 3, lines 35-41), are successively performed on each of said opposing leads (Col. 1, lines 52-58 and Col. 3, lines 22-28), and he also teaches that applying a mechanical force to a wire lead in a non-destructive test is well known in the art (Col. 1, lines 20-33)..

- With respect to claim 22, Salantino teaches means for holding the package 10 and a portion of the lead 22 in respective stationary positions as in elements 10,24,30 and 42, and means for applying a force to the lead proximate an area where the lead is joined to the package (Col. 3, lines 18-21). Even though he doesn't literally disclose measuring the resistance of the lead to the force, Salantino teaches that the pressure exerted in his test when the bond is broken is representative of the strength of the bond (Col. 3, lines 40-41), as he also teaches that applying a mechanical force to a wire lead in a non-destructive test is well known in the art (Col. 1, lines 20-33). Applicant's teachings disclose in the Background of the Invention that it is well known in the art to utilize and test ceramic packages to which wires have been brazed (Page 1, lines 14-17 and 25-26). Ball teaches that it is well known in the art to utilize means to pull a lead wire while measuring the increasing force until the wire bond breaks (Col. 2, lines 59-63). It would have been obvious at the time the invention was made to a person having ordinary skill in the

art to modify the teachings of the testing method of Salantino utilizing a well known lead testing technique by measuring how much force the lead withstands until it finally breaks as taught by both Salatino and Ball to make said method versatile therefore allowing to precisely obtain quantitative values that represent actual force measurements of the force being applied when the bond breaks. It would also have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teachings of the testing method of Salantino utilizing well known lead fixing materials and methods such as ceramic and brazing as taught in the applicant's Background of the Invention to further test well known and commonly used materials in order to make the test being performed more realistic.

- With respect to claim 24, Salatino teaches means for holding comprising first and second holding members comprised by elements 24,30,42 and 44 for holding both the package 10 and a portion of at least one lead 22 therebetween in respective stationary positions, the holding members being capable of being separated from each other for removal and insertion of the package and leads and of being closed with respect to each other for firmly holding the package and leads held therebetween (Col. 3, lines 6-21).



5. Claims 13-15 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salantino in view of Chang et al. (Pat. 5,753,823).

- With respect to claim 13, Salantino teaches the first and second holding means as in elements 30 and 42 depicted on the left and right side of Figure 4 being closed with respect to each other. Salantino fails to specifically disclose the closing of said holding means by utilizing mechanical means linking the first and second holding means with each other. Chang et al. teaches that the utilization of mechanical means as in elements 32a, 32b, 34a and 34b to secure supporting or holding portions such as elements 20a and 20b of a test fixture. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teachings of the testing apparatus of Salantino utilizing a well-known type of mechanical fixing structures making a device more reliable and accurate by providing a firm and secure union between the holding means in order to prevent external forces from inducing slippage between the holding means that would result in inaccuracies.
- With respect to claim 14, Salantino fails to disclose mechanical means including a screw and abutment against which the screw may be tightened, wherein there is compressible means between the screw and abutment. Chang et al. teaches that the utilization of a screw and abutment as in elements 32a, 32b, 34a and 34b to secure supporting or holding portions such as elements 20a and 20b of a test fixture. It would have been obvious at

the time the invention was made to a person having ordinary skill in the art to modify the teachings of the testing apparatus of Salantino utilizing a well known type of mechanical fixing structures that provide a firm and secure union between the holding means making a device more reliable and accurate by providing a firm and secure union between the holding means in order to prevent external forces from inducing slippage between the holding means that would result in inaccuracies.

- With respect to claim 15, Salantino teaches a package 10 having leads 22 which are held between first and second holding members comprised by elements 24,30 and 42 as noted in Figure 4.
- With respect to claim 21, Salantino teaches a window 34 through which a lead can be accessed by pushing or pulling means (Col. 3, lines 18-21).

6. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ball et al. (Pat. 6,068,174) in view of applicant's admitted prior art (Background of the invention) and further in view of Biggs et al. (Pat. 4,907,458).

- With respect to claim 28, Ball et al. teaches a clamp as either element 100 or 150 combined with 158 for holding both the package and lead in respective stationary positions (Col. 10, lines 33-37), means for applying a mechanical force to the lead proximate an area where it is joined to a package as in element 168 (Col. 9, lines 63-67). Ball et al. fails to teach joining the wires or leads by brazing, and specifically utilizing a force gauge for measuring the resistance of the lead to force. Applicant's teachings disclose in the Background of the

Invention that it is well known in the art to utilize and test ceramic packages to which wires have been brazed (Page 1, lines 14-17 and 25-26). Biggs et al. teaches a non destructive pull testing device (Col. 3, lines 26-30) which comprises a force gauge for measuring the resistance of the lead to the force as in element 78 (Col. 4, lines 25-28). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teachings of the pull testing of Ball et al. utilizing well known lead fixing methods such brazing as taught in the applicant's Background of the Invention to further test well known and commonly used methods of securing a lead in order to make the test being performed more realistic. ). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teachings of the pull testing of Ball et al. utilizing the teachings of the pull-testing device of Biggs et al. by further providing it with force gauge measuring means to determine the force which the wire received with high sensitivity.

***Allowable Subject Matter***

7. Claims 16-20,25 and 27 are allowed.

***Response to Arguments***

8. Applicant's arguments filed on July 16, 2003 have been fully considered but they are not persuasive. In response to applicant's arguments, the term therebetween is defined as being located in an intermediate space or interval, in a way so that elements situated between two elements in any way are therefore situated therebetween the

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elements. Applicant's arguments have been fully addressed by the above presented office action.

***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

10. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilybett Martir whose telephone number is (703)305-6900. The examiner can normally be reached on 9:00 AM to 5:30 PM.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (703)305-4816. The fax phone numbers for the organization where this application or proceeding is assigned are

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(703)305-3432 for regular communications and (703)305-3432 for After Final communications.

13. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.



Lilybett Martir  
Examiner  
Art Unit 2855



October 30, 2003



EDWARD LEFKOWITZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800